

Assessment Readiness of Grade 11 TVL-HE Students Through Enhance Simulation-Based Learning at Pinagtongulan Integrated National High School

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Abstract

This study evaluated the effectiveness of enhanced simulation-based learning (SBL) as an intervention in improving the assessment readiness of Grade 11 students under the TVL-Home Economics strand at Pinagtongulan Integrated National High School for the School Year 2025-2026, particularly in preparation for the Food and Beverage Services (FBS) NC II certification.

The study assessed students' competencies in the six units of competency of FBS NC II namely, prepare dining room/restaurant area for service, welcome and take food and beverage order, promote food and beverage product, provide food and beverage service to guests, provide room service, and receive and handle guest concerns. This also measures the extent of improvement in the students' knowledge, skills, and confidence brought about by simulation-based learning. Additionally, the study also explored the challenges encountered by students during the implementation of simulation-based learning activities.

A quantitative descriptive research design was employed involving 39 Grade 11 TVL-HE students from Pinagtongulan Integrated National High School. Data were collected using a validated three-part survey questionnaire based on TESDA standards. Descriptive statistics such as weighted mean and ranking were used to analyze the data

The findings revealed that Grade 11 TVL-Home Economics students have a satisfactory to high level of competencies in preparing for the Food and Beverage Services (FBS) NC II assessment which indicates that students already possess the foundational knowledge and skills required in FBS. HE 11 students also demonstrated a significant level of improvement in their assessment readiness, particularly in terms of skills and confidence, indicating that SBL is an effective strategy in bridging the gap between theoretical knowledge and actual performance. The intervention also fostered active engagement and enhanced students' ability to perform tasks aligned with industry standards. However, challenges such as time constraints and pressure, and varying levels of student participation were identified during the implementation process.

Based on these findings, the study recommends the continuous integration of enhanced simulation-based learning in the TVL-HE curriculum to strengthen assessment readiness for FBS NC II, the conduct of regular mock assessments to simulate actual TESDA evaluation, the provision of adequate resources and structured time for simulation activities, and the development of support mechanisms to address identified challenges.

Keywords: *simulation-based learning, assessment readiness, TVL-HE, FBS NC II, competency*

1. Introduction

Technical-Vocational-Livelihood (TVL) students, particularly in the Home Economics (HE) strand, are expected to demonstrate practical competencies aligned with industry standards. In the context of Food and Beverage Services (FBS) NC II, students must be fully prepared to perform real-world tasks during assessment. However, many learners experience difficulty due to limited exposure to actual service environments, lack of confidence, and insufficient hands-on practice.

Simulation-Based Learning (SBL) has emerged as an effective instructional approach that replicates real-life workplace scenarios in a controlled learning environment. Through SBL, students are given opportunities to practice skills, apply knowledge, and develop confidence before actual assessment. It is widely recognized as an effective instructional strategy in technical-vocational education because it allows students to perform real-world tasks in a controlled environment. According to Nguyen and Nguyen (2024), SBL enhances students' practical readiness by replicating authentic workplace scenarios. Similarly, Ahmed and Malik (2022) found that simulation-based instruction improves learners' technical skills, confidence, and problem-solving abilities, particularly in vocational programs. Moreover, studies show that simulation activities help bridge the gap between theoretical knowledge and practical application, making students more prepared for competency-based assessments such as the Food and Beverage Services NC II certification.

This study investigates the effectiveness of simulation-based learning in improving the assessment readiness of Grade 11 TVL-HE students at Pinagtongulan Integrated National High School. Specifically, the study sought to answer the following questions:

1. How may the Grade 11 TVL Home Economics students describe their current level of competencies in preparing for the FBS NC II assessment in terms of the units of competency namely:
 - 1.1. preparing the dining room/restaurant area for service;
 - 1.2. welcoming guests and taking food and beverage orders;
 - 1.3. promoting food and beverage products;
 - 1.4. providing food and beverage services to guests;
 - 1.5. providing room service; and
 - 1.6. receiving and handling guest concerns?
2. To what extent does simulation-based learning help improve the assessment readiness of Grade 11 students in the TVL-Home Economics strand in taking Food and Beverage Services NC II in terms of:
 - 2.1 knowledge;
 - 2.2 skills; and
 - 2.3 confidence?
3. What are the challenges encountered by the Grade 11 students during application of simulation-based learning?
4. Based on the findings of the study, what enhancement activities may be proposed?

2. Materials and Methods

● Research Design

This study utilized a **quantitative descriptive research design** to assess the effectiveness of simulation-based learning in enhancing students' assessment readiness.

● Participants

The participants were **39 Grade 11 TVL-HE students** enrolled at Pinagtongulan Integrated National High School. A total population sampling technique was used to ensure that all students in the class were included in the study.

● Research Instrument

A **validated researcher-made questionnaire** was used to collect data. The instrument consisted of three parts:

- Part I: Competency level of HE 11 students in the six core units of FBS NC II
- Part II: Extent of improvement in knowledge, skills, and confidence
- Part III: Challenges encountered during SBL implementation

The questionnaire was based on TESDA competency standards.

● Data Collection Procedure

Data were collected after the implementation of simulation-based learning activities. Students participated in structured simulations replicating real FBS scenarios such as table setting, order taking, and service procedures. After the intervention, respondents answered the survey questionnaire.

● Data Analysis

Descriptive statistics, particularly **weighted mean and ranking**, were used to analyze and interpret the data.

3. Results

Section 1: Competency Level in FBS NC II

Results revealed that students were competent to very competent across different areas of Food and Beverage Services. However, some tasks such as repeating reservation details and table setup were rated lower compared to others, indicating areas needing improvement.

Section 2: Impact of Simulation-Based Learning

Through simulation-based learning, students showed a very great extent in improvement terms of their skills, while also having a great extent on knowledge and confidence. Students reported improved ability to perform tasks, increased understanding of procedures, and greater confidence in handling service situations.

Section 3: Challenges Encountered

Students reported minimal challenges during the implementation of SBL. The most common concern identified was time pressure during simulations, particularly when completing tasks within a limited timeframe.

Section 4: Summary of Findings

Overall, the results indicate that simulation-based learning:

- Enhances practical skills
- Improves knowledge retention
- Builds student confidence
- Prepares learners for real assessment scenarios

4. Discussion

The findings of the study confirm that simulation-based learning is an effective instructional strategy in preparing TVL-HE students for FBS NC II assessment. By replicating real-world service environments, SBL allows students to practice essential skills in a safe and structured setting.

The high impact on skills development suggests that hands-on learning is crucial in technical-vocational education. Additionally, the improvement in confidence highlights the importance of repeated practice and exposure in reducing student anxiety during assessment.

The minimal challenges reported indicate that SBL is generally well-received by students.

However, the issue of time pressure suggests the need for better time management training and more structured simulation activities.

These findings are consistent with existing literature emphasizing experiential learning as a key factor in skill acquisition and competency development in vocational education.

5. Conclusion

This study demonstrated that simulation-based learning is an effective approach in enhancing the assessment readiness of Grade 11 TVL-HE students in Food and Beverage Services NC II. It significantly improves students' skills, knowledge, and confidence, while providing a practical and realistic learning experience.

Recommendations

Based on the findings, the study recommends the following:

1. Continuous implementation of simulation-based learning in TVL-HE classes
2. Conduct of regular mock NC II assessments to strengthen readiness
3. Focused training on identified weak competencies
4. Development and implementation of a structured Simulation-Based Learning Enhancement Program

Proposed Intervention

A **Simulation-Based Learning Enhancement Program** is proposed, which includes:

- Progressive and structured simulation activities
- Full-service cycle practice (from reservation to billing)
- Mock NC II assessments
- Reflection and feedback sessions